

WHAT IS CLAIMED IS:

- 1 1. A security method for use in a communication system,
2 the security method comprising:
3 receiving an IP packet including a source address and
4 a destination address;
5 obtaining physical location information indicating the
6 location of a user device which is the source of said IP
7 packet; and
8 determining, as a function of the obtained physical
9 location information, an action to be taken.

- 1 2. The security method of claim 1, wherein determining an
2 action to be taken includes:
3 comparing the obtained physical location information
4 to information listing physical locations authorized to
5 obtain access to a service for which security is to be
6 provided.

- 1 3. The security method of claim 2, further comprising:
2 dropping said packet when said comparing does not
3 result in a match between the obtained physical location
4 information and the information listing physical locations
5 authorized to obtain access to the service.

- 1 4. The security method of claim 2, wherein said service
2 is one of a banking service, video on demand service and a
3 music on demand service.

- 1 5. The security method of claim 2, further comprising:

2 forwarding said packet to the destination address when
3 said comparing results in a match between the obtained
4 physical location information and the information listing
5 physical locations authorized to obtain access to the
6 service.

1 6. The security method of claim 1, wherein obtaining
2 physical location information includes:
3 transmitting a location information request message
4 including the source address of the received IP packet; and
5 receiving in response to said transmitted location
6 information request message, information corresponding to
7 the location of the user device.

1 7. The security method of claim 6, further comprising:
2 determining the location of the user device from edge
3 router and port information obtained from an edge router.

1 8. The security method of claim 7, wherein determining
2 the location of the user device further includes:
3 performing a database lookup operation to retrieve a
4 geographic location stored in association with said edge
5 router and port information.

1 9. The security method of claim 8, further comprising:
2 further receiving, in response to said transmitted
3 location information request message, a device identifier
4 associated with the source address of said IP packet; and
5 comparing the received device identifier to a list
6 device identifiers corresponding to stolen devices.

1 10. The security method of claim 9, wherein said device
2 identifier is a MAC address.

1 11. The method of claim 9, further comprising:
2 generating a message indicating the detection of a
3 stolen device when said comparing step detects a match
4 between the received device identifier and an device
5 identifier in said list of device identifiers corresponding
6 to stolen devices.

1 12. The method of claim 11, wherein said generated message
2 includes information indicating the a geographic location
3 where the identified stolen device is being used.

1 13. The method of claim 12, wherein said geographic
2 location is a post office address.

1 14 The method of claim 1, further comprising:
2 determining if the destination address corresponds to
3 a service for which security is to be provided; and
4 wherein said steps of obtaining physical location
5 information and determining an action to be taken are
6 performed when it is determined that said destination
7 address corresponds to a service for which security is to
8 be provided.

1 15. A security device for use in a communication system in
2 which IP packets are transmitted, the device comprising:
3 means for receiving an IP packet including a source
4 address and a destination address;

5 means for obtaining physical location information
6 indicating the location of a user device which is the
7 source of said IP packet; and

8 means for determining, as a function of the obtained
9 physical location information, an action to be taken.

1 16. The security device of claim 15, further comprising:
2 a database of physical location information listing
3 physical locations authorized to obtain access to said
4 service; and

5 wherein said means for determining an action to be
6 taken includes a comparator for comparing the obtained
7 physical location information to information listing
8 physical locations authorized to obtain access to a service
9 for which security is to be provided.

1 17. The security device of claim 16, further comprising:
2 means for dropping said packet when said comparing
3 does not result in a match between the obtained physical
4 location information and the information listing physical
5 locations authorized to obtain access to the service.

1 18. The security device of claim 2, wherein said service
2 is one of a banking service, video on demand service and a
3 music on demand service.

1 19. A stolen device detection method, the method
2 comprising the steps of:
3 storing a list of device identifiers corresponding to
4 stolen devices;

5 receiving an IP packet from a device including an IP
6 address associated with said device;

7 using said IP address associated with said device to
8 determine a device identifier also associated with said
9 device;

10 comparing the determined device identifier to said
11 stored list of device identifiers corresponding to stolen
12 devices; and

13 determining that said IP address corresponds to a
14 stolen device when said determined device identifier
15 matches a device identifier in said stored list.

1 20. The stolen device detection method of claim 19,
2 wherein said determined device identifier is a MAC address
3 and wherein said stored list of device identifiers is a
4 list of MAC addresses.

1 21. The stolen device detection method of claim 19,
2 further comprising:
3 determining the location from which said device is
4 used from said IP address and from information determined
5 from a MAC address corresponding to said device.

1 22. The stolen device detection method of claim 21,
2 further comprising:
3 generating a message indicating the location of device
4 determined to be a stolen device, said message including
5 the determined location from which said device is being
6 used.

1 23. The stolen device detection method of claim 21,
2 wherein said step of determining the location from which
3 said device is used includes:

4 determining a router and port through which said
5 device transmitted said IP packet; and

6 obtaining location information from a database
7 associating router and port numbers with physical locations
8 corresponding to subscriber premises.

1 24. The stolen device detection method of claim 23,
2 further comprising:

3 storing owner contact information with said list of
4 stolen device identifiers.

1 25. The stolen device detection method of claim 24,
2 wherein said owner contact information includes an E-mail
3 address corresponding to an owner of a stolen device.

1 26. The stolen device detection method of claim 23,
2 further comprising:

3 storing law enforcement contact information with said
4 list of stolen device identifiers.

1 27. The stolen device detection method of claim 24,
2 wherein said law enforcement contact information includes
3 an E-mail address corresponding to an owner of a stolen
4 device.

1 28. A system for detecting stolen devices using IP
2 addresses, the system comprising:

3 a stored list of device identifiers corresponding to
4 stolen devices;

5 means for receiving an IP packet from a device
6 including an IP address associated with said device;

7 means for determining a device identifier associated
8 with said device from said IP address associated with said
9 device;

10 means for comparing the determined device identifier
11 to said stored list of device identifiers corresponding to
12 stolen devices; and

13 means for determining that said IP address corresponds
14 to a stolen device when said determined device identifier
15 matches a device identifier in said stored list.

1 29. The system of claim 28, wherein said determined device
2 identifier is a MAC address and wherein said stored list of
3 device identifiers is a list of MAC addresses.

1 30. The system of claim 29, further comprising:

2 means for determining the location from which said
3 device is used from said IP address and from information
4 determined from a MAC address corresponding to said device.

1 31. The system of claim 30, further comprising:

2 means for generating a message indicating the location
3 of device determined to be a stolen device, said message
4 including the determined location from which said device is
5 being used.

1 32. A location verification method, the method comprising;
2 receiving an IP packet including a source address;

3 determining from said source address the geographic
4 location from which said IP packet was sent;

5 comparing the determined geographic location
6 information to expected information indicating the expected
7 source of an IP packet; and

8 determining a reporting error when said determined
9 geographic location information does not match the expected
10 geographic location information.

1 33. The location verification method of claim 32, further
2 comprising:

3 transmitting a message including information on the
4 determined reporting error to a law enforcement authority.

1 34. The location verification method of claim 33, further
2 comprising:

3 including the determined geographic location
4 information in said message.

1 35. The location verification method of claim 34, further
2 comprising:

3 identifying the device transmitting said IP packet
4 from a MAC address determined from a database associating
5 said MAC address with said source address.

1 36. The location verification method of claim 35, wherein
2 said IP packet is transmitted from a bracelet worn by a
3 parolee and wherein said IP packet includes parolee
4 identification information, the method further comprising:

5 including in said message information obtained from
6 said IP packet identifying the parolee.

1 37. The location verification method of claim 33, further
2 comprising:
3 determining if said IP packet was sent at a
4 predetermined time during which a location reporting
5 message was scheduled to be transmitted.